WHAT IS CLAIMED IS:

1. In a wireless communication system comprising a Base Station connected with a mobile unit, a method of detecting the presence of a specific mobile unit in a coverage area of at least one neighboring Base Station, comprising:

the Base Station connected with the mobile unit provides, to the at least one neighboring Base Station, information about the connection with the mobile unit, including rough TOD and a device address for the mobile unit;

at the at least one neighboring Base Station, receiving information and generating a list of frequencies in which the mobile unit is likely to transmit; and

at the at least one neighboring Base Station, checking for a signal transmitted by the mobile unit.

2. Method, according to claim 1, further comprising:

at the neighboring Base Station, monitoring frequencies that are not blocked by interferences

3. Method, according to claim 2, further comprising:

for each frequency that is monitored, maintaining a histogram of a number of hops that have been detected in a certain duration of time, and their average signal-to-noise ratios.

4. Method, according to claim 3, further comprising:

determining a measure of spectral cleanness of a frequency being monitored as a function of signal-to-noise ratios (SNRs) of the hops.

5.   Method, according to claim 4, further comprising:

monitoring a group (M) of frequencies that have a best cleanness measure most of the time.

6.   Method, according to claim 5, further comprising:

periodically monitoring a frequency which is not in the group of frequencies having the best cleanness measure.

7.   Method, according to claim 1, wherein the mobile unit is a device selected from the group consisting of:

telephone handset, standard cordless telephone handset, cellular telephone handset, personal data device, personal digital assistant (PDA), computer, laptop computer, e-mail server, a device utilizing point-to-point protocol (PPP) to the Internet via a central remote access server, a headset, a personal server, a wearable computer, a wireless camera, and a mobile music player.

8.   Method, according to claim 1, further comprising:

providing communication links between the Base Stations, wherein the communication links between the Base Stations are selected from the group consisting of RF links and land lines; and

transferring connection status information and rough synchronization information between the Base Stations over the communications links.

9.   Method, according to claim 1, wherein:

the Base Stations and the Switch are connected via a wired or wireless local area network (LAN).

10.   Method, according to claim 1, wherein:

the wireless communication system comprises a wireless private branch exchange (**WPBX**) handling calls from mobile units comprising handsets.